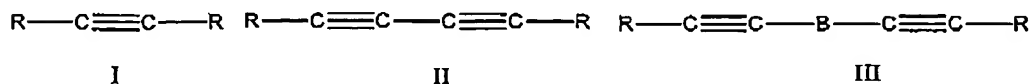


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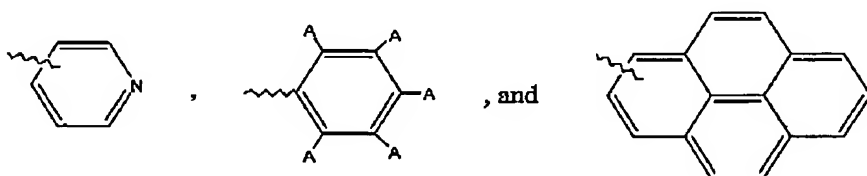
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Amendments to Claims

Claim 1 (Currently Amended) A conducting molecule according to Formula I, ~~II, or III:~~

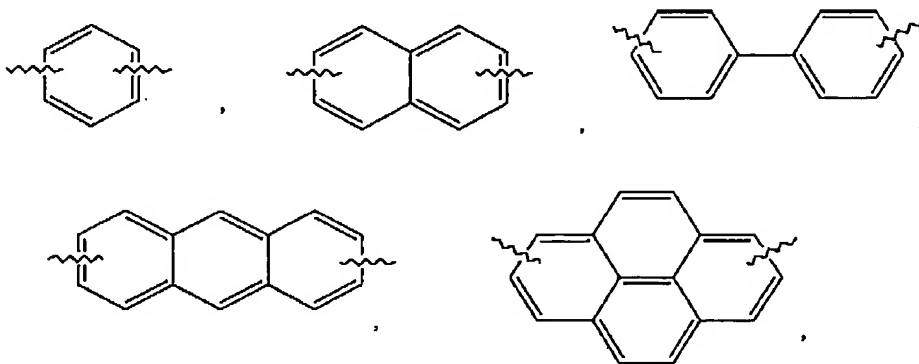


wherein R is independently selected from the group consisting of:



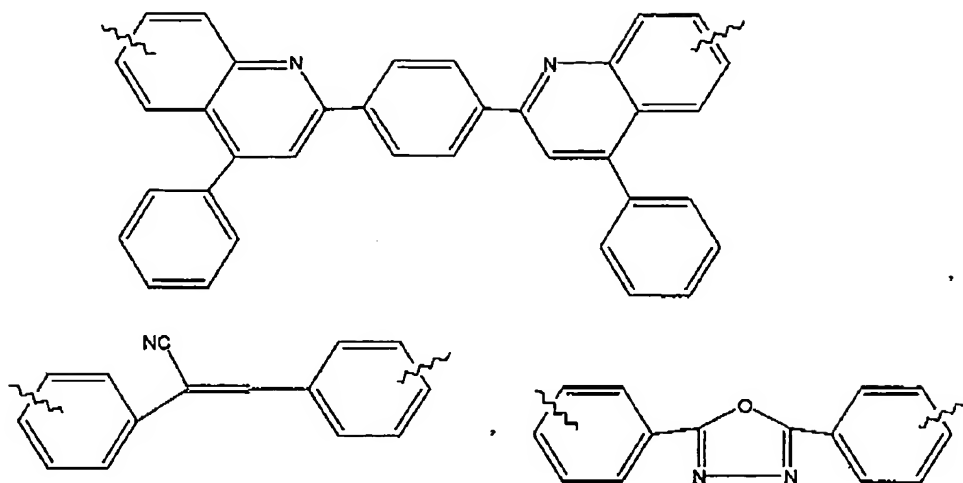
wherein A is independently selected from the group consisting of H, a C1-C6 alkyl group, F, -CN, and -S-C(=O)-CH₃, wherein at least one of F, -CN, and -S-C(=O)-CH₃ is present;

and B is selected from the group consisting of:

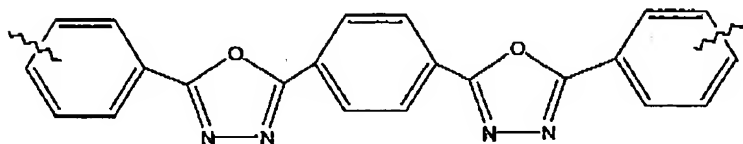


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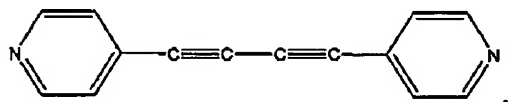
and



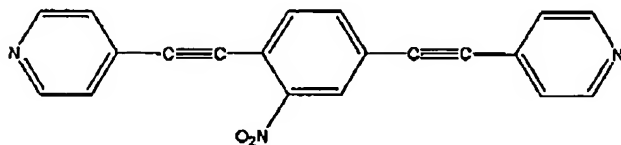
wherein B is optionally substituted with H, a C1-C6 alkyl group, F, -CN, -NO₂, and -S-C(=O)-CH₃.

Claim 2 (Original) A conducting molecule according to Claim 1 selected from the group consisting of:

(a)



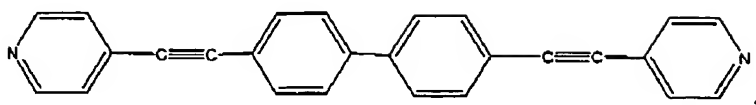
(b)



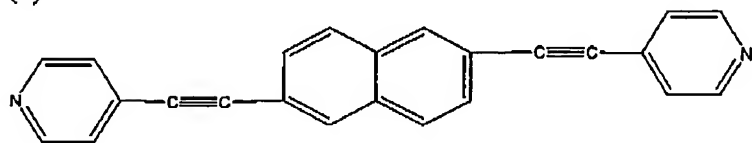
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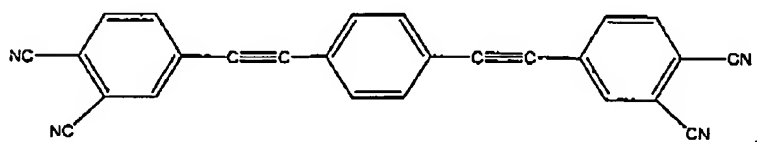
(c)



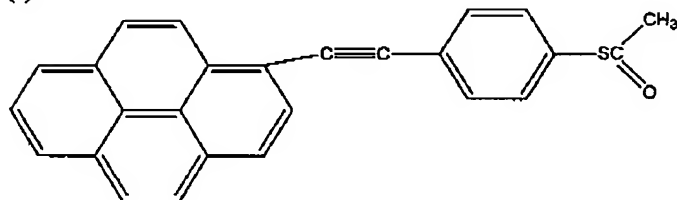
(d)



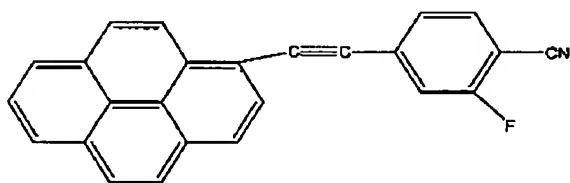
(e)



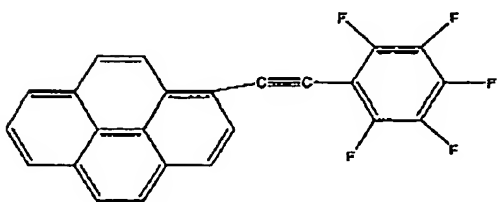
(f)



(g)



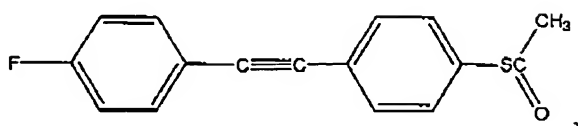
(h)



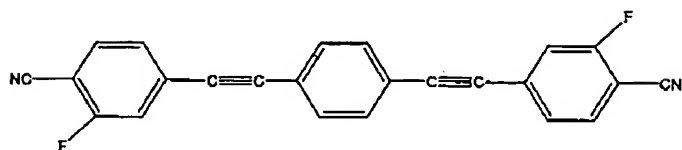
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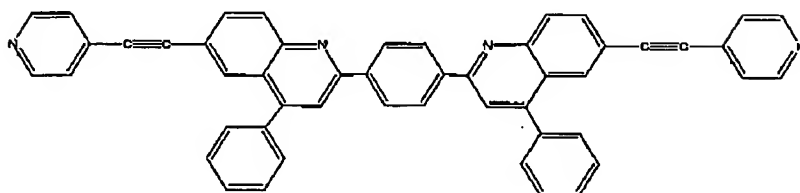
(i)



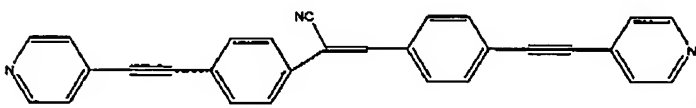
(j)



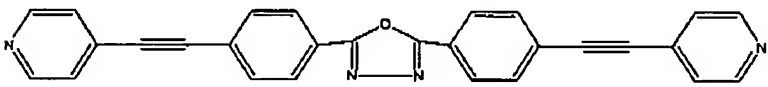
(k)



(l)

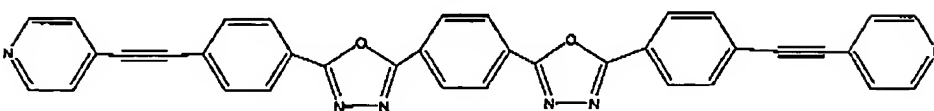


(m)



and

(n)



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Claim 3 (Withdrawn) A molecular based memory system, molecular wire, or molecular switch, comprising a composition or either of Claim 1 or Claim 2.

Claim 4 (Withdrawn) A process for synthesizing a supramolecular structure comprising the steps of:

- (a) providing a conducting molecule of any of Claims 1 or 2;
- (b) providing a suitable substrate;
- (c) contacting the conducting molecule of (a) with the substrate of (b) wherein the conducting molecule is immobilized on the substrate;
- (d) contacting the immobilized conducting molecule of (c) with a redox or photochemical reagent under conditions wherein the immobilized conducting molecule is activated; and
- (e) contacting the activated conducting molecule with the conducting molecule of step (a) wherein molecular addition takes place and a supramolecular structure is formed.

Claim 5 (Withdrawn) A process according to Claim 4 wherein steps (d) and (e) are optionally repeated.

Claim 6 (Withdrawn) A process according to Claim 4 wherein the substrate is selected from the group consisting of silicon wafers, synthetic polymer supports, glass, agarose, nitrocellulose, nylon, nickel grids or disks, carbon supports, aminosilane-treated silica, polylysine coated glass, mica, and semiconductors.

Claim 7 (Withdrawn) A supramolecular structure synthesized by the process of Claim 4.

Claim 8 (Withdrawn) A sensor comprising a supramolecular structure synthesized by the process of Claim 4.